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GENERALLY ACCEPTED AGRICULTURAL AND MANAGEMENT PRACTICES FOR SITE SELECTION AND ODOR CONTROL FOR NEW AND EXPANDING LIVESTOCK PRODUCTION FACILITIES

SECTION I. INTRODUCTION

In 1999, the Michigan legislature enacted P.A. 261 which amended the Michigan Right To Farm Act. P.A. 261 requires the establishment of Generally Accepted Agricultural and Management Practices for Site Selection and Odor Control for New and Expanding Livestock Facilities. These Generally Accepted Agricultural and Management Practices (GAAMPs) are written to fulfill that purpose and to provide uniform, statewide standards and acceptable management practices based on sound science.

A farm or farm operation that conforms to these and other applicable GAAMPs adopted under the Michigan Right to Farm Act according to the Michigan Right to Farm Law (Act 93 of 1981, as amended), shall not be found to be a public or private nuisance. This protection also covers farm operations that existed before a change in the land use or occupancy of land within one mile of the boundaries of the farmland, if before that change, the farm would not have been a nuisance. Likewise, this conditional protection applies to any of the following circumstances (P.A. 93 Section 3 (3)):

- (a) A change in ownership or size.
- (b) Temporary cessation or interruption of farming.
- (c) Enrollment in governmental programs.
- (d) Adoption of new technology.
- (e) A change in type of farm product being produced.

To be afforded nuisance protection under these GAAMPs, certain producers must complete, and conform with, the site selection review and verification process, as described in Section V.

FARM PLANNING AND SITE DEVELOPMENT

The GAAMP(s) for site selection and odor control for new and expanding livestock production facilities are intended to fulfill three primary objectives:

- 1) Environmental Protection
- 2) Social Considerations (neighbor relations)
- 3) Economic Viability

When all three of these objectives are met, the ability of a farm operation to achieve agricultural sustainability is greatly increased.

Farm planning involves three broad phases: Collection and analysis (understanding the problems and opportunities); decision making; and implementation. Collection and analysis includes: Determining objectives; inventorying resources and analyzing data.

TECHNOLOGIES

Odor control is a primary focus relating to the social consideration objectives of these GAAMPs. Odor perception is a subjective response to what people detect through their sense of smell in the air they breathe and poses unique management challenges for livestock producers. While there is no scientific evidence that odorous gases that escape from livestock production facilities are toxic at the concentrations in the atmosphere experienced by neighbors, they can become an annoyance or a nuisance if manure is mismanaged or livestock production facilities are improperly sited.

Recent experiences with the National Pork Producers Council On-Farm Odor Assessment Program suggest that significant odor reduction can be achieved by improving the management of certain livestock production facilities. Improved management as well as the adoption of new technologies to control odor offer a means for reducing odor from livestock production facilities and manure storage facilities, thus broadening the area within which livestock production facilities may be appropriately sited.

Odor reduction technologies include, but are not limited to, vent biofilters, manure storage covers and composting. Each technology presents different challenges and opportunities. These should be considered during the planning process for a new or expanding animal livestock facility. Management activities for odor control are outlined in the GAAMPs for Manure Management and Utilization.

The Minnesota Odor Estimator Model is available as a component of the planning process. For new sites, this will aid in identifying non-farm residences that may be impacted by the site and whether the location or technology proposed for the new facility will minimize the impact on non-farm residences. For sites of expanding livestock production the model will aid in the planning to identify additional non-farm residences that may be affected by the expanding operation and whether location or technology can minimize the impact on additional residences. The use of the Minnesota Odor Estimator Model will alert the producer to potential conflicts while still in the planning process. The Minnesota Odor Estimator model is available from MSU Extension, consultants, NRCS and MDA's Website (<http://www.michigan.gov/mda>)

The goal for effective odor management is to reduce the frequency, intensity, duration and offensiveness of odors that neighbors might experience. Because of the subjective nature of human responses to certain odors, recommending appropriate technology and management practices is not an exact science. Since site selection for livestock production facilities is an important factor in managing, and therefore, minimizing potential for odor impacts upon neighbors, site selection for new and expanding residential housing should consider setbacks to avoid potential land use conflicts.

Generally Accepted Agricultural and Management Practices for Site Selection and Odor Control for New and Expanding Livestock Production Facilities will help determine the suitability of sites for livestock production facilities. These GAAMPs provide a planning process that can be used to properly plan new and expanding facilities to increase the suitability of a particular site and enhance neighbor relations.

Table 1. Animal Unit Equivalents

Animal Units	50	250	500	750	1,000
Animal Type ¹	Number of Animals				
Slaughter and Feeder Cattle	50	250	500	750	1,000
Mature Dairy Cattle	35	175	350	525	700
Swine ²	125	625	1,250	1,875	2,500
Sheep and Lambs	500	2,500	5,000	7,500	10,000
Horses	25	125	250	375	500
Turkeys	2,750	13,750	27,500	41,250	55,000
Laying Hens or Broilers	5,000	25,000	50,000	75,000	100,000

¹All other animal classes or types or sizes (eg. Nursery Pigs) not in this table, but defined in the Michigan Right to Farm Act or described in Michigan Commission of Agriculture Policy, are to be calculated as one thousand pounds live weight equals one animal unit.

²Weighing over 55 pounds.

SECTION III - DETERMINING ACCEPTABLE LOCATIONS FOR LIVESTOCK PRODUCTION FACILITIES

All potential sites for new and expanding livestock production facilities can be identified by three general categories. These are:

Category 1. Sites normally acceptable for livestock production facilities.

Category 2. Sites where special technologies and/or management practices could be needed to make new and expanding livestock production facilities acceptable.

Category 3. Sites that are not acceptable for new and expanding livestock production facilities.

Category 1 Sites: Sites normally acceptable for livestock production facilities.

Category 1 sites are those sites which have been traditionally used for agricultural purposes and are in an area with a relatively low residential housing density. These sites are located where there are 5 or fewer non-farm residences within ¼ mile from a livestock production facility with less than 749 animal units, and 5 or fewer non-farm residences within ½ mile from a livestock production facility with 750 animal units or greater. New and expanding livestock production facilities should only be constructed in areas where local zoning allows for agriculture uses.

Category 2 Sites: Sites where special technologies and/or management practices could be needed to make new and expanding livestock production facilities acceptable.

Category 2 sites are those where site-specific factors may limit the environmental, social or economic acceptability of the site for livestock production facilities and where structural, vegetative, technological and management measures can be planned and implemented to address those limiting factors. These measures should be incorporated into a Site Plan and a Manure Management System Plan, both as defined in Section IV, which are required for all new and expanding livestock production facilities that are within this category. New and expanding livestock production facilities should only be constructed in areas where local zoning allows for agriculture uses.

Table 3 shows how Category 2 sites are defined and lists setbacks, verification and notification requirements. As an example, a proposed site for an expanding livestock production facility with 500 animal units and between 6 and 20 residences within ¼ mile of the facility, would have a setback of 400 feet from the owner's property line, would require that a Site Plan and a Manure Management System Plan be verified by MDA, and would require that the local unit of government be notified.

Table 3. Category 2 Site Setbacks, Verification and Notification

Total Animal Units	For Expanding Operations Non-Farm Residences within Distance	For new Operations Non-Farm Residences Within Distance	Property Line Setback¹	Site Review and Verification Process	Local Unit of Government Notification²
50-249	6 - 20 within 1/4 mile	6-13 within 1/4 mile	250 ft	Upon Producer Request ³	Yes
250-499	6 - 20 within 1/4 mile	6-13 within 1/4 mile	300 ft	Yes	Yes
500-749	6 - 20 within 1/4 mile	6-13 within 1/4 mile	400 ft	Yes	Yes
750-999	6 - 20 within 1/2 mile	6-13 within 1/2 mile	500 ft	Yes	Yes
1000 or more	6 - 20 within 1/2 mile	6-13 within 1/2 mile	600 ft	Yes	Yes

¹ May be modified upon written request based upon the Minnesota Odor Estimator Model, utilizing the 95% odor annoyance free requirement, proximity to existing non-farm residences, adjacent land use and management technologies implemented at the livestock production facility.

² If proposed new facility or expansion is on a township boundary, the adjacent township will be notified.

³ To be afforded nuisance protection under these GAAMP(s), producers must conform to all requirements of the GAAMP(s), including a site plan and manure management system plan, but are not required to complete the Site Review and Verification Process if less than 250 animal units and in Category 2.

Surface water protection - New and expanding livestock production facilities shall not be constructed within the 100 year flood plain of a stream reach where a community surface water source is located, unless the livestock production facility is located downstream of the surface water intake.

2. High Public Use Areas - Areas of high public use or where a high population density exists are subject to setbacks to minimize the potential effects of a livestock production facility on the people that use these areas. New livestock production facilities should not be constructed within 1500 feet of hospitals, churches, licensed commercial elder care facilities, licensed commercial childcare facilities, school buildings, commercial zones, parks or campgrounds. Existing livestock production facilities may be expanded within 1500 feet of high public use areas with appropriate MDA review and verification. The review process will include input from the local unit of government and from people who utilize those high public use areas within the 1500-foot setback.
3. Residential Zones - Areas that are zoned primarily for residential use will generally have housing at a density that necessitates setback distances for livestock production facilities to prevent conflicts. New livestock production facilities shall not be constructed within 1500 feet of areas zoned for residential use where agriculture uses are excluded. Existing livestock production facilities may be expanded within 1500 feet of areas zoned for residential use with approval from the local unit of government.

SECTION IV. - DEVELOPING A SITE PLAN AND A MANURE MANAGEMENT SYSTEM PLAN

Site Plan

A Site Plan is a comprehensive layout for a livestock production facility, and includes a base map(s) to scale of the property illustrating the following features:

- Property lines, easements, rights-of-way, and any deed restrictions.
- Public utilities, overhead power lines, cable, pipelines, and legally established public drains.

Conservation Plan - field-specific plan describing the structural, vegetative and management measures for the fields where manure and other by-products will be applied.

Dead Animal Disposal Plan - identify the processes and procedures used to safely dispose of the bodies of dead animals (Bodies of Dead Animals Act P.A.-239 of 1994).

SECTION V - SITE REVIEW AND VERIFICATION PROCESS

Siting Request Process:

The GAAMPs for site selection and odor control for new and expanding livestock production facilities are applicable for producers with new and expanding livestock production facilities with a capacity of 50 animal units or greater (see Table 1), who are seeking nuisance protection under the Right to Farm Act. Producers with facilities that require MDA verification in categories 1, 2, or 3 should contact the MDA and begin the site selection review and verification process prior to the construction of new livestock production facilities and expansion of existing livestock production facilities.

To begin the review and verification process, contact can be made with the Michigan Department of Agriculture Right to Farm Program by calling 877-632-1783. This number is toll free and is operational during normal business hours.

Development of Plans:

A request to begin the site review and verification process can be made by submitting a letter from the responsible party to the MDA Right to Farm Program. This letter should outline the proposed new construction or expansion project, any areas of concern, agencies and individuals the producer is already working with, and the proposed timeline. The responsible party must also submit a completed site plan and a manure management system plan. If special technologies or management practices are to be implemented for the successful operation of the livestock production facility, these must be included in the siting request package.

Producers may also utilize recognized industry, university, and agency professionals in the development of their siting request, site plan and manure management system plan. Structures should be designed and constructed by competent individuals or companies utilizing generally accepted standards, guidelines and specifications. (e.g. NRCS, Midwest Plan Service)

MDA Preliminary Site Visit:

MDA will conduct preliminary site visits to proposed new and expanding livestock production facilities. This site visit will take place upon receipt of the complete siting request package and will focus on addressing conformance with the plan components, identifying areas of concern, and verifying information submitted in the

Recognized Professionals:

Recognized professionals in the siting and management of livestock production and odor control practices may include, but are not limited to personnel from the following:

- a. Conservation Districts
- b. Industry Representatives
- c. Michigan Department of Environmental Quality
- d. Professional Consultants and Contractors
- e. Professional Engineers
- f. United States Department of Agriculture Natural Resources Conservation Service
- g. University Agricultural Engineers and other University Specialists

The site review and verification process will be conducted in accordance with MDA procedures and protocol.

